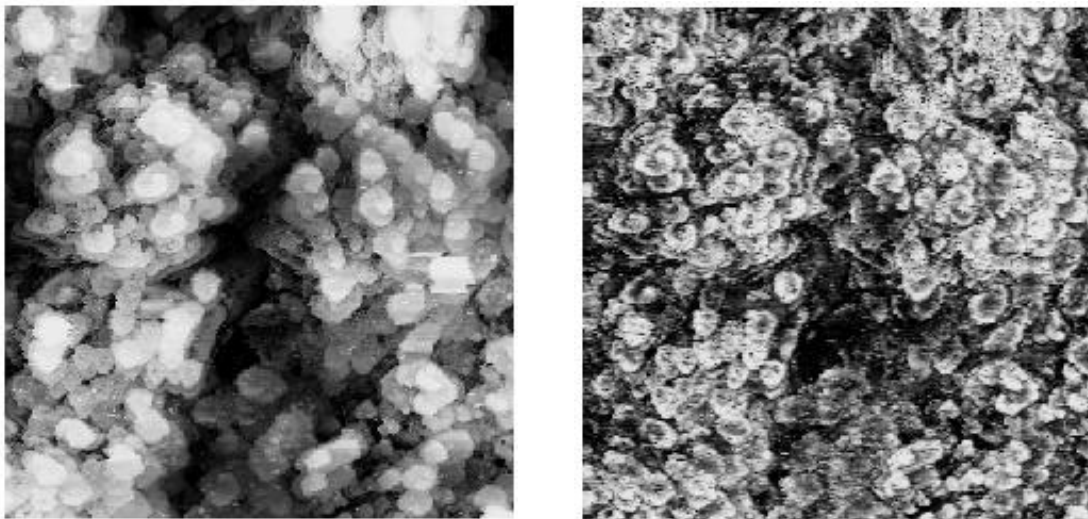
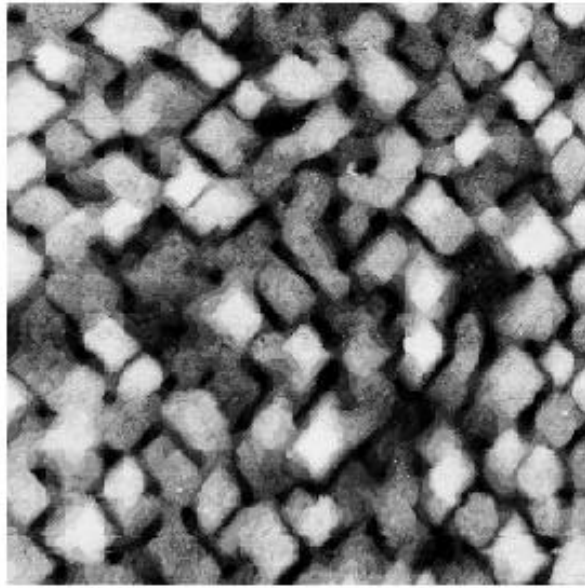


## High-Temperature Superconductors Grown onto Semiconductors

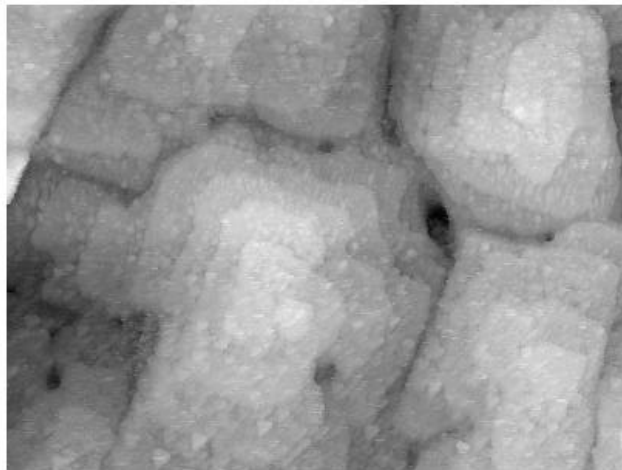
- $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  films
- Substrates: MgO, Si, GaAs



STM top view image of the surface structure of the  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  film (120nm-thick) deposited onto an MgO substrate. (480nm x 480nm)  
(simultaneously topography and tunneling barrier height)



STM top view image of the surface structure of the  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  film (60nm-thick) deposited onto an  $\text{Y}_2\text{O}_3/\text{YSZ}/\text{Si}$  substrate. (1000nm x 1000nm)



STM top view image of the surface structure of the  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  film (120nm-thick) deposited onto an  $\text{MgO}/\text{GaAs}$  substrate. (540nm x 400nm)